

Nelson-Hershfield Electronics

INTRODUCING THE

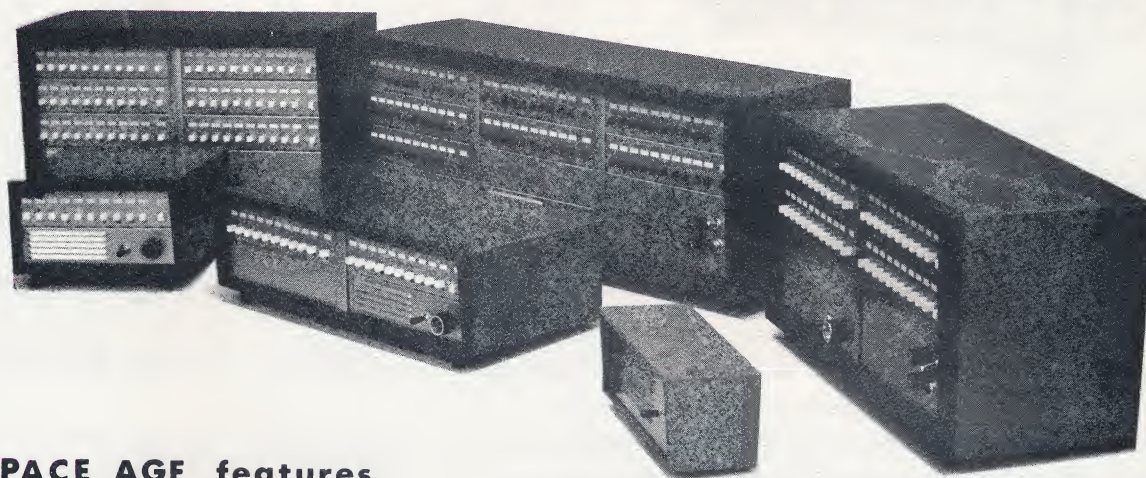
1848 West Campbell Avenue

Phoenix, Arizona 85015

Phone 264-1348

New Modular

commander communicator



with SPACE AGE features

MODULAR TRANSISTORIZED SOLID STATE CIRCUITRY assures long life and cool operation.

MODULAR communications provides space for expansion and future growth.

MODULAR communications means equipment combinations custom designed to suit your particular needs.

MODULAR communication means any combination of switchbanks even including solid state locking light call annunciation.

MODULAR control assures that you talk out loud and listen softly with two-way volume control.

MODULAR power units available at 5, 50, and 150 watts audio output.

MODULAR executive control assures privacy where you want it.

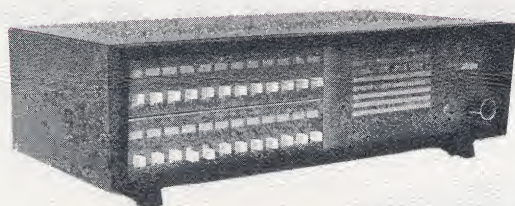
MODULAR switching means that every switch is guaranteed for over 1 million operations.

PIONEERING SOUND IDEAS THRU ELECTRONICS

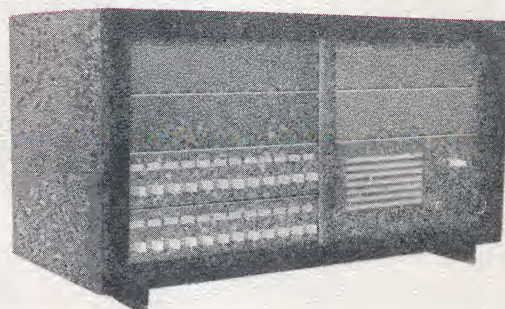
COMMANDER COMMUNICATOR

AN INTERCOM WITH A BUILT-IN FUTURE

THESE ARE TWINS WITH A DIFFERENCE.
THIS BABY CAN GROW BECAUSE IT IS
MODULAR WITH FOUR BLANK PANELS



CB-4 CABINET



CB-8 CABINET

Four blank panels leave room for tomorrow. They give you room for expansion. In the larger Commander Communicator shown you could add forty-eight selector switches, or you could add a fifty watt booster amplifier and twenty-four switches for a total of forty-eight.

Modular communications offers all sorts of intriguing possibilities. It permits you to custom design a system with that forward look into the future.

The Commander Communicator is the first unit that can be modified in the field with the addition of simple modular components.

Now is the time to have our expert communication engineers take a look into your future. Let us plan and install a modular communications system that will do its job today and tomorrow.

MASTER COMMUNICATION MODULE



IM-6 MASTER

The master control unit is the heart of the Commander Communicator. You may talk and listen to other selected intercom stations.

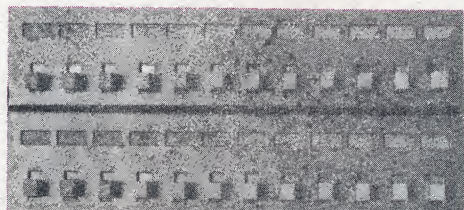
Two-way volume control assures that you may talk out loud and listen softly. Six watts (12 watts peak) of transistorized audio power turns the softest voice into a roar. Special circuits filter out undesirable background noise and give clear, articulate yet natural voice tones.

When you receive a call at the master station you may answer from across the room or a flick of the switch to the privacy position and no one can overhear your confidential conversation.

The IM-6 master module is delivered complete with its own power supply ready to plug into a convenient power outlet or a separate power supply may be remotely located up to several thousand feet from the master station.

Quality and long-life are the key to the design of the IM-6 master station. The telephone-type talk-listen switch is guaranteed for over one million operations. Fully transistorized construction uses the latest solid state circuitry. A revolutionary type of amplifier design draws power only when you talk. At all other times the unit is automatically on stand-by and operates for less than fifty cents a year.

SELECTOR SWITCH MODULE - TWELVE OR TWENTY-FOUR POSITION NEUTRAL CENTER



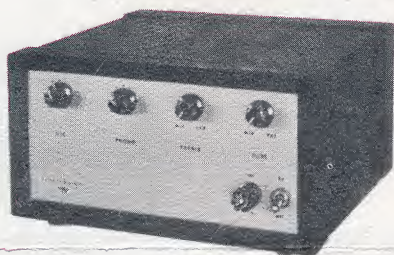
SB-12 SWITCH BANK

Selector switch capacity is the key to the future of your Commander Communicator System. Custom wired into virtually unlimited combinations, the SB-12 selector switch may be used to call up to twelve locations or any switch may be converted into a group call switch to permit the action of one switch to call a number of other stations. The SB-24 three position switch with neutral center may be used to expand the calling capacity to twenty-four stations without any increase in module size requirement.

When the multiple master system is used and all-call is not possible a common all-call relay Model ACR may be provided to permit any master to utilize the group paging and communications facilities.

Call origination may be accomplished in one of three ways: (1) Voice Call-In - The calling party identifies his stations by voice. (2) Buzzer Call-In - Switchbank SB-12B alerts the master station. With the flick of a reply switch the call path is completed and the conversation proceeds as normal. (3) Locking-Light Annunciator Switchbank SB12LL indicates each call in the window above the selector switch. Light remains on and call recorded until the selector switch is operated to answer the call. The Commander Communicator with the locking light annunciation makes a very effective nurses' call system. No contacts or moving parts are used in turning on the call lights. All action is accomplished with the latest solid state silicon controlled rectifiers.

BOOSTER AMPLIFIER MODULE- 50 WATTS



UA-5 AMPLIFIER

A fifty-watt booster amplifier will convert the Commander Communicator into a small centralized school system to serve over fifty classrooms, or it may be used for selective high level paging to large areas or those with a high noise level. Integrated into the Commander Communicator the UA-50 amplifier may be used independently of the IM-6 intercom module.

This provides an independent and separate channel for background music, paging, or general announce service. Output level may be monitored with the OM-5 output monitor. When used independently the UA-50 then becomes the equivalent of a two-channel

communications system and the microphone and phono inputs may be expanded with the MM-4 microphone mixer or the CS-4 channel selector assembly.

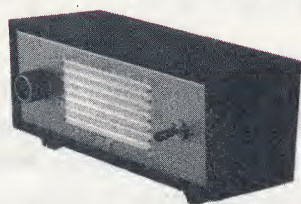
Bass and treble controls permit adjustment of the tone to compensate for room acoustics or adjustment for full range background music.

The independent microphone input permits the use of a balanced low impedance microphone whose lines may be run as much as two thousand feet without appreciable loss in volume or tone quality.

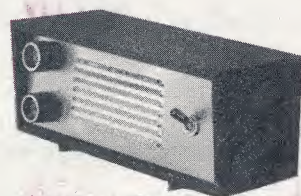
For background music a radio tuner, record player, tape recorder, or program bridged from some remote location may be fed into the phono input of the amplifier.

Using the exclusive Nelson-Hershfield "Econocircuit" the UA-50 automatically goes on standby when not in use and may be operated in the standby condition for less than fifty cents a year. All controls are front mounted including convenient fuse and on-off switch.

REMOTE STATIONS RM-1 AND RM-3



RM-1 REMOTE STATION

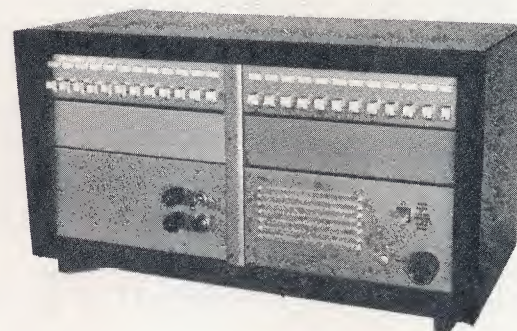


RM-3 REMOTE STATION

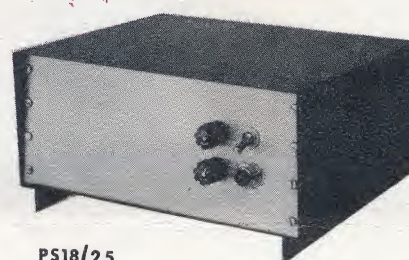
The two remote stations shown are housed in the same cabinets and are electronically identical except that one unit has an auxiliary selector switch to permit call origination to three instead of one master station. The codes V, B, L, after the model number indicates call-in by voice, buzzer or locking light annunciator. A "privacy" position on the three position call-in switch permits optional privacy at the remote or reply may be made from across the room. Each RM remote station has its own control to permit convenient adjustment of volume. In the high level system, the DC145 line matching transformer is required. The privacy position of the switch may at option be converted to a general page receiving position. The RM remote unit is a compact 9" wide by 5" high and 4" deep. Wiring connections are made to convenient screw terminals. It may be wall or desk mounted.

POWER SUPPLY PS18/25

From the Model PS18/25 Power Supply an entire intercommunications system may be operated from one power source. This feature is a great convenience and economy when electrical outlets are not available or central control of power from standby batteries is necessary. For the IM-6 master station, a twisted pair of 22 AWG wires will serve a master station up to 1000 feet away from the power supply. For the UA-50 power amplifier 14AWG cable is recommended for runs in excess of 100 feet. The power supply may be remotely located in its own cabinet, or may be conveniently located in one of the modular master cabinets as shown.

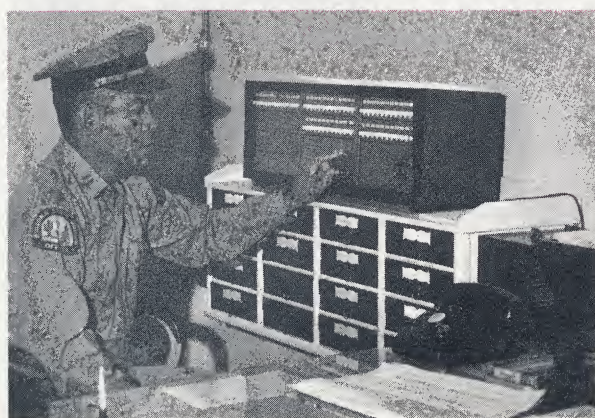


PS-18/25 IN MASTER CABINET



PS18/25

FIELD TESTED AND PROVEN



Nelson-Hershfield Electronics guarantees every Commander Communicator for one-year from the date of installation. Any material showing inherent mechanical or electrical defects will be replaced promptly at no expense to the purchaser, accident, neglect or abuse to the system excepted.

Call 264-1348 and ask one of the skilled staff of Nelson-Hershfield Electronic's engineers to survey your organization to show you what may be accomplished when you put the Commander Communicator to work for you.



Nelson-Hershfield Electronics

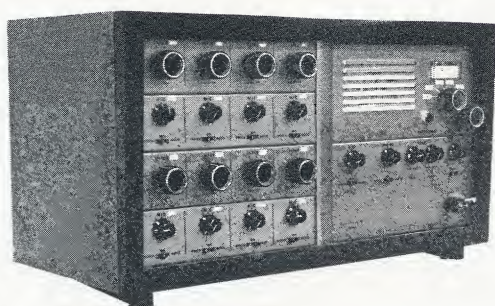
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DELUXE AMPLIFIERS - DA SERIES

TEN AND FIFTY WATT MODELS



Transistorized, modular design, the top DA-50 as shown has been expanded to provide nine microphone inputs. The unit shown below has been further expanded to provide selectors for each microphone input and OM-5 provides audio-visual program monitor.

Efficient and reliable with controlled fidelity, the DA Series of deluxe amplifiers utilize the latest transistorized circuitry to give you the finest amplifiers available today.

Balanced, low impedance microphone input circuitry permits the use of microphone lines up to a mile in length without appreciable loss in volume or fidelity. Utilizing the exclusive "Auto-balance" circuit developed by Nelson-Hershfield, the balanced input is accomplished without the use of transformers which are susceptible to hum and noise. Each microphone input not only has independent control of volume but it also has a three position switch to provide the broad range frequency response required for music or the restricted response recommended for speech. A center position of the switch turns the microphone input off without requiring a change in the volume setting.

The phono input of the amplifier is equipped to accept a crystal or magnetic phonograph cartridge. A front panel switch permits selection of an auxiliary radio input without the complications of using a split fader or some other complex control method. The center or neutral position of this switch provides an "off" position which may be used without requiring that the volume control be reset each time.

Independent control of both the bass and treble band of audio frequencies permits the adjustment of system frequency response to satisfy the most demanding room acoustics. Full range tone controls also assure the exclusion of undesirable background noise and shaping of the frequency response curve to provide full range high fidelity response for music or crisp, articulate amplification of the voice.

A master volume control permits adjustment of system volume level without the necessity of adjusting each control. Associated with the master volume is a three position switch which permits the transfer of the system preamplifier from its own amplifier to another thereby permitting two channel operation.

Power outputs available are 10 and 50 watts with peak power of 20 and 100 respectively. Using a proven bridge circuit the normal output impedance is 25 volt balanced without an output transformer. However this impedance may be changed with the use of a DC-145 line matching transformer.

The amplifier is on automatic standby when program material, either voice or music, is not being presented to it. "Econocircuit" reduces standby costs to as low as fifty cents per year. This is all accomplished without the use of standby relays.

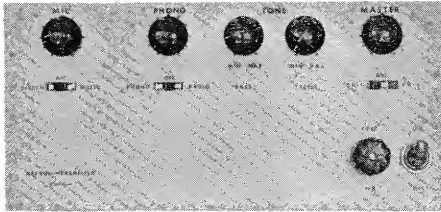
Master power control and fuse are both available from the front of the panel. Finished in luxurious antique gold the units are only 9" wide, 4" high and 9" deep.

Of modular construction the DA-10 or DA-50 deluxe amplifiers may be combined with many pieces of accessory equipment to provide the latest and most modern equipment available.

Call 264-1348 today and invite a Nelson-Hershfield Electronics Engineer to show you what may be accomplished with our modern, modular amplifiers.

PIONEERING SOUND IDEAS THRU ELECTRONICS

DA-50 (DA-10) DELUXE AMPLIFIERS



The contractor shall furnish and install a fully transistorized, modular DA-50, (DA-10) fifty (ten) watt amplifier. Power output shall be fifty (ten) watts with less than 5% distortion. Peak power shall be one-hundred (twenty) watts. Peak line power consumption at 118 VAC shall be 117 (24) watts. Quiescent line power consumption shall be 6 (4) watts. Gain: Microphone gain shall be 125 db with equalized magnetic phono input gain 120 db. Equalized crystal phono and auxiliary radio input gain shall be 85 db. Frequency response shall be ± 2 db from 50 to 15,000 cycles with microphone hum and noise -70 db below rated output with auxiliary inputs -85 db. Inputs shall be: One balanced 50-250 ohm microphone, one magnetic phono equalized, one crystal phono equalized, one radio input, 50,000 ohms. Output impedance shall be 25 volt (25 or 70 volt) balanced with impedance conversion possible with DC-145 output transformer. Input Controls: Microphone volume with separate switch for speech, off, wide range. Phono volume with separate switch for phono, off, radio. Master Volume Control with preamplifier output selector switch for Channel 1, Off, Channel 2. Tone Controls: Treble at 10 KC variable +6 db to -12 db. On-off power switch with fuse shall be front mounted. Dimensions shall be 9" wide, 4" high, 9 1/2" deep. Finish: Antique gold.

SB-12 TWELVE SWITCH BANK



Technical Description: The SB-12 switchbank may be used to control the amplifier output to twelve separate locations or one of the twelve switches may be modified to provide all call service. Each switch provides double pole, double throw action. A marking window is above each switch.

Architect-Engineers Specifications: The contractor shall furnish and install a twelve position switchbank to control the output distribution of the amplifier's signal. This unit shall provide on-off with group or all-call switch function provided as required. The "off" position of the switch may also be used for background music distribution if required. Above each switch position shall be a translucent panel upon which the switch function may be marked and a busy light provided when required. Contacts of the switches shall be gold plate to resist corrosion and provide long life with over one million operations guaranteed. Units shall be Nelson-Hersfield Model SB-12L with busy lights as required.

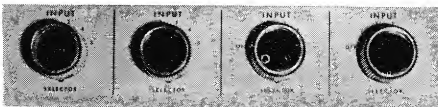
MM-4 FOUR CHANNEL MICROPHONE MIXER



Technical Description: Mixing four microphones simultaneously, the MM-4 provides independent volume adjustment of each microphone with separate switch serving each channel to provide speech filter, off, and music response of each channel without interfering with the preset volume.

Architect-Engineers Specifications: The contractor shall furnish and install a transistorized, four channel microphone mixer of modular construction. Each microphone channel shall have a transformerless balanced 50-250 ohm input with independent control of the volume of each channel. An independent channel control switch of the volume of each channel. An independent channel control switch shall provide the following functions: Speech filter, off, and music. Gain of each channel shall be +24 db. Hum and noise shall be -85 db below -1.0 volt maximum output. Attenuation from maximum to minimum volume shall not exceed 3.0 db. Power requirement shall be -12.0 VDC at 4.0 ma.

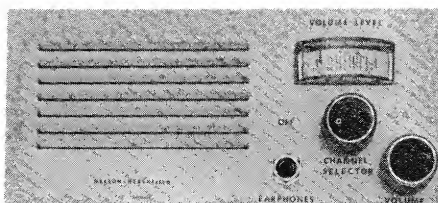
CS-4 FOUR CHANNEL SELECTOR



Technical Description: Each of the four selector switches will rotate to independently select any one of five input circuits. The selector is well shielded and may be used to select microphones, phonographs, tape players, radios or any other low or medium level signal input device.

Architect-Engineers Specifications: The contractor shall furnish and install a four channel selector panel with each selector switch providing five position selection and on-off position. Input and output terminal shall be designed for balanced operation with terminals provided for shield continuity and ground. The entire terminal assembly shall be shielded and protected for minimum hum pickup. Dimensions shall be modular 2" high by 9" wide and 8" deep with finish in antique gold. Modular dimension 9" wide by 2" high.

OM-5 AUDIO-VISUAL OUTPUT MONITOR



Technical Description: Providing audio visual monitoring of up to five amplifier output circuits, the OM-5 provides aural monitoring of program material by an internal loudspeaker or earphones with independent volume adjustment. Visual monitoring is accomplished with a VU meter which may be preset for any volume adjustment.

Architect-Engineers Specifications: The contractor shall furnish and install an audio-visual output level monitor capable of monitoring five output channels. Input impedance of the unit shall be adjustable for 25 or 70 volt transmission line. Visual monitoring shall be accomplished by a color coded and decibel calibrated meter having an internal calibration adjustment. Aural monitoring shall be accomplished using a 3 1/2" loudspeaker with 1.00 oz. Alnico V magnet or an external monitor loudspeaker may be provided if required. A two circuit jack shall permit earphone monitoring of selected program material. A continuously variable volume control shall permit adjustment of audio level. The unit shall be finished in baked enamel with all functions clearly marked. Modular panel dimension shall not exceed four inches high by nine inches wide.